

REMARKS

Applicant has amended claim 29 to clarify the recited elements. The second joint member includes a bone fixation portion and a load bearing and articulation portion. The load bearing and articulation portion comprises a diamond compact comprising a substrate and a sintered polycrystalline diamond table, and the diamond table forms the articulation surface.

Applicant has amended claims 40 and 55 to address the deficiencies noted by the Examiner.

Claim 56 has been amended in a manner similar to that of claim 29 so as to clarify the relationship between the claimed elements.

Claims 36 and 65 have been amended to correct the noted deficiencies.

Various of the remaining dependent claims have been amended for clarity and for consistency with the amendments made to the independent claims.

Applicant requests a telephone interview before any subsequent office action should the Examiner have any additional §112 concerns with the claims so that Applicant may better understand the Examiner and correct the claims as may be necessary.

In reviewing the claims and the previous restriction, it is believed that claim 30 was improperly withdrawn. The claim specifies solvent metal in the polycrystalline diamond compact. The restriction was to whether the diamond feedstock contained solvent metal or not. Applicant notes that this and other applications teach that the solvent metal may be located in the substrate and be swept through the diamond crystals during sintering to sinter the diamond. The solvent metal would thus still be present in the sintered diamond even though the feedstock did not contain solvent metal. Applicant notes that solvent metal is used in sintering diamond compacts. Applicant therefore requests that claim 30 be considered.

As regards the rejections in light of the prior art, Applicant believes that the art does not teach the claimed elements, and in fact teaches away from the claimed invention. The claims require a prosthetic joint having sintered diamond compact. Sintered diamond compacts include sintering metal between diamond crystals, and thus present a surface which includes both diamond as well as metal.

Applicant notes that Dearnley ('719) does not teach the use of polycrystalline diamond compact. Applicant notes that DLC does not stand for diamond like compact, but stands for diamond like carbon. The DLC is applied using a deposition method, such as chemical vapor deposition or physical vapor deposition. While Dearnley does not discuss the differences between DLC and diamond, much less sintered diamond compact, Lewin ('286) does.

Lewin teaches that while the deposited diamond like layers are harder than steel, they are not as hard as diamond. Lewin also teaches that the diamond like carbon layer is a good insulator, while diamond is a very good conductor of heat. See column 1 lines 10-22, for example. Thus, neither Dearnley nor Lewin teach that sintered diamond compacts are suitable for use in a biological environment.

There is no expectation that sintered diamond is suitable for use in prosthetic joints since the references do not discuss sintered diamond, but discuss a different carbon material with different properties. Sintered polycrystalline diamond compact is chemically quite different from diamond. The sintered diamond compact uses metals to sinter the diamond crystals together, and thus presents a biologically exposed surface which includes both diamond as well as sintering metals and reaction products created in the sintering such as carbides. The references that surfaces composed entirely of inert diamond like carbon are biologically

compatible. There is simply no teaching in the references that a sintered diamond compact is biologically compatible and suitable for use in a prosthetic joint.

Dennis ('327) teaches that diamond compacts are suitable for cutting bits used in cutting through rocks. There is no teaching to use sintered diamond compacts in prosthetic joints where the goal is to eliminate wear, and no teaching that the sintered polycrystalline diamond compacts are biologically compatible. To the contrary, Dennis teaches sintering the diamond with cobalt, a metal recognized to be biologically toxic. See columns 3 and 5.

Applicant therefore believes that the prior art teaches against the use of sintered diamond compacts in biological applications such as prosthetic joints. Dennis teaches that these are suitable in highly abrasive operations such as cutting rock, and teaches that the diamond is sintered with cobalt, a known toxic metal. Dearnley and Lewin teach achieving biocompatibility by forming a layer of pure diamond like carbon over the joint and teach the inertness of the carbon. This is contrary to Applicant's teaching to provide a surface which contains sintering metals in addition to carbon.

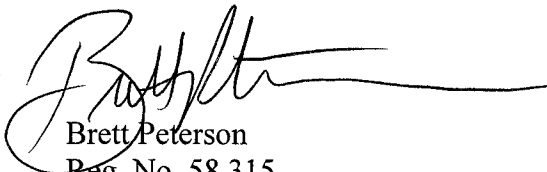
Applicant therefore believes that the claims are in condition for allowance over the prior art.

Applicant is willing to file a terminal disclaimer as necessary. Applicant has submitted herewith an information disclosure statement containing additional patents owned by Applicant. Applicant proposes submission of a terminal disclaimer after review of the IDS so that any additional terminal disclaimer requirements may be addressed at the same time.

The Commissioner is hereby authorized during the entire pendency of this application to credit any overpayment and debit any amount owing, including fees for extensions of time, to Deposit Account No. 50-2720.

Sincerely,

BATEMAN IP LAW GROUP

A handwritten signature in black ink, appearing to read "Brett Peterson", with a long horizontal flourish extending to the right.

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